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"Looking into the future"

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“Looking Into The Future”

BY

B. A. WORTHINGTON,
President
The Cincinnati, Indianapolis & Western R. R. Co.

Address Delivered at ANNUAL BANQUET of the INDIANA ENGINEERING SOCIETY and the INDIANA SANITARY AND WATER ASSOCIATION, Claypool Hotel, Indianapolis. February the Fourth, Nineteen Hundred Sixteen.

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Mr. 14/1916 - B.B

"Looking Into the Future"

Messrs. Twin-Toastmasters, Ladies and Gentlemen:

Whether or not we are inclined to accept the Darwinian theory of evolution of mankind, we can but admire the fine workings and the perfect co-ordination of those mysterious laws which govern and regulate all forms of living organisms, fitting each for its own peculiar environments. The improvement or the extinction of particular species, call it "a process of Nature" or, if we choose, "A dispensation of Providence," which is really the same thing, it is nothing more or less than the slow but sure execution of the inviolable laws of Nature.

Some scientists assert that life is but the functioning of organs; and they profess to trace, in a more or less logical manner, the evolution of mankind back to the "origin of species." And even though all their theories and claims be granted, it does not preclude or refute the existence of the Divine Author, or his plans which undeniably are evidenced by such evolution or "improvement of species." And when we are reminded that He has created nothing in vain, it is at once apparent that His plans are maturing and that we actually are performing our humble roles in the stupendous work designed by the Supreme Architect.

In all living organisms there are ever at work changes involving the waste of component tissues which render necessary, in order to the preservation of life, proper assimilation of nutritive matter; and it is essential to the maintenance of health that due relation exist between the processes of waste and repair so that one may not be in excess of the other. When the supply of nutritive matter is suspended or diminished from any cause, a wasting results in the affected parts or organs of the living body, and this wasting is called Atrophy.

ATROPHY.

Atrophy may result from disuse of certain members or from a cessation of the functions of certain organs. The rudimentary legs of the whale is an example of the disuse of members of the body, due primarily to changed environments; whereas the eyeless fish of subterranean streams is an example of atrophy due to a cessation of the functions of the organs of sight.

Atrophy may affect only certain members or organs, or it may affect the entire body, as the flow of blood becomes interrupted. It cannot result as long as the flow of blood is normal and nutrition unimpaired, because this is the natural agency for the renewal of wornout tissues.

It is wrong to suppose that these laws which govern the waste and repair of individual living bodies, are separable and distinct from the laws governing evolution of species. All these various natural laws "work together," co-ordinated with finest precision.

It is also wrong to presume a limit to the application of any such laws. They govern the lowest forms of life with the exact rigidity that they control the highest. No living organism is exempted. And, as Darwin had attempted to prove, not only individuals but groups of individuals are affected—atrophied or hypertrophied, if you please, according to the nutrition supplied to the different members and organs to meet the demands of the changing environments of the living bodies, and this is the basic theory of the origin of species, their improvement and their extinction.

It is wrong to suppose that these self-same laws do not govern nations. Nations themselves are bodies—aggregations of individual living members, in the same sense that species are classes. A nation may become atrophied, wholly, or in part, by a cessation or diminution of commerce, which a nation requires to be healthy and strong. The agency of nutrition of a nation is its TRANSPORTATION FACILITIES. Commerce is the nutriment. Take away commerce, or close the avenues of exchange, and you certainly deprive a nation of all means of subsistence; its body politic becomes atrophied and the nation perishes.

ENGINEERING A NATION.

You might ask me, and quite properly, why I should mention matters of this nature to Engineers who have to do only with the designing and construction of works. And, furthermore, what it might have to do with the subject of my talk, "Looking into the Future." "Engineering" is a very broad term; nevertheless, however broad it may be, it is limited to the providing of ways and means for the future. No engineering work was ever undertaken for purposes of the past—always for work to be performed. The Engineer, of necessity, must consider the requirement of the future—the load to be carried, the work to be performed. Efficiency and economy are his watch-words.

Possibly some of us have never stopped to consider that we all, in our humble capacities, are engineers—engineers engaged in the greatest project ever undertaken—the building of a nation, a republic wherein each person is a living member. Some of us are engaged in the building or upbuilding of railroads, some in building cities, or enlarging them, some are electrical engineers, some are sanitary engineers; nevertheless, in whatever capacity, you are a part of an inseparable whole, a living body whose mind is the concrete mind of all; whose nutritive system is the highways of commerce—the railroads; whose nervous system is an elabarote network of electric wires whereby surpluses and deficiencies are reported and adjusted. Factories and mills are its digestive organs whereby raw materials are manufactured for constructive purposes.

How fitting therefore is our Motto: E Pluribus Unum! One gigantic living body composed of a hundred million living members, each an active unit in shaping the destiny of his country.

Let us not deceive ourselves into the thought that the constructive work of this great republic is completed. It has only begun. The illustrious pioneers who have gone before simply "laid out" the rough plans; the Declaration of Independence was their license; and when they anchored their cannons to defend that declaration, they drove the stakes for the greatest nation the world has ever seen—a nation that has grown and is growing, a nation that has been described as follows:

Bounded on the East by the primeval chaos;
On the North by the Aurora Borealis;
On the West by the procession of the equinoxes;
And on the South by the Day of Judgment.

EVOLUTION.

Wrapped in the harsh iconoclastic statements of the Scientists relative to the origin of life, we find a beautiful thought shimmering with truth: the functioning of organs began coincident with the flow of blood through the living tissues. So far as this applies to the origin of species of animal life, it is wholly theoretical, because eons are involved. Not so, however, with the origin of species of national life, the evolution of which is historical and affords some striking analogies.

THE BIRTH OF A NATION.

In 1776, the United States of America was conceived. It was composed of a hoo-doo number of states—the original thirteen. The first seventy years of our National existence—until about 1845—was what might be called the embryotic period of its existence. The nation that we know today was not born until the modern means of transportation was introduced and commerce, the life blood of the nation, began to flow. With the puffing of the first locomotive, the throb of life began.

And, strange to say, the most peculiar aspect of this situation is surprisingly Darwinistic, in that life began with the functioning of organs and the flow of blood. It may have been a "process of nature" or it may have been a "dispensation of Providence" that gave us a suitable means of transportation at the very time it was required for the evolution of a new species. It will be recalled that the dire need of improved means of transportation was recognized early, and that Congress had made appropriations for elaborate systems of highways and waterways, all of which now are practically abandoned—that which remains is but a silent marker of progress, foot-prints in mud which shall turn to stone, to commemorate a passing type of motive power. As the legs of the whale have become atrophied since circumstances drove its prehistoric ancestors into new environments, so indeed are the legs of our motive power being atrophied since circumstances have compelled us to improve our means of transportation.

A PERIOD OF CONSTRUCTION.

Following the embryotic period of seventy years, another seventy years has passed, a period of development that is without precedent. The youngest nation in the world has grown to be the richest, inherently the strongest, and the only great nation at peace with the rest of the world. Wonderful cities, with comforts and conveniences undreamed of, have sprung into existence almost over night—an engineering feat that has no counterpart in history.

Yet we are not a finished product; we have only begun. Upon the foundations of the past, we shall have to erect the structures of the future, big enough and strong enough to carry the load of responsibilities that we have assumed. However, we have lived long enough to establish a principle, and we know with unquestioned certainty that this principle involves transportation facilities—a circulating system, economical and efficient, to meet the demands of commerce.

TRANSPORTATION FACILITIES.

Up to this time, the development of our Transportation facilities has been along purely natural lines. Undeveloped natural resources and the promise of ultimate financial reward, have lured Capital into railroad construction far in advance of actual needs,—possibly the Nation could have "existed" as it existed prior to the introduction of steam locomotives, but it could not possibly have thrived as it has with its free circulating system.

Capital is still awaiting its reward, but the Nation as a whole has grown wonderfully rich—its wealth having increased from Seven Billion in 1850 to One Hundred Seven Billion in 1910. Certainly, this could never have been possible without suitable transportation.

The "stop thief" trick is old in the profession, but we are told that there is nothing new under the sun. And the Railroads owning to their varied and scattered interests, offer an inviting field for exploitation. We have heard much about over-capitalization and time-worn stock-jobbing; but when we consider the substantial wealth that the railroads have created in the past fifty years referred to, we certainly must be impressed with the wisdom of the policy pursued in regard to railroad construction and operation, on the whole.

However, between the professional politician and the professional labor organizer, both with bad axes to grind and both incessantly preaching the doctrine of "De world am flat and de sun do move," we sometimes lose sight of these most essential facts.

At the present time more than one-sixth of the entire railroad mileage in the United States is being operated for the benefit of creditors; in other words, bankrupt! This is a record of insolvency unparalled in history—a most alarming condition of affairs, not only from the standpoint of the thousands of investors who in good faith have invested their money in railroad securities, but from the standpoint of millions of patriotic citizens who are responsible for engineering this national project of ours.

We should ever be mindful that this Government is still young—that it is still in the experimental stage; that it is a living thing, wholly and solely the product of our will. And, too, that there is much CONSTRUCTIVE work to be done, to offset the DESTRUCTIVE work that has now thrown 42,000 miles of our railroad upon the mercy of the courts.

Heretofore, in the making of their rates to meet their financial needs, the railroads have availed themselves of a natural means of self-preservation. And in fighting, out in the open, their disputes with the brigands of labor, they have enjoyed at least a living chance.

Now, the power to make their own rates is withdrawn absolutely except in the matter of reducing rates—even though the scale of rates is much lower than in any other civilized country. Organized labor is strongly entrenched and erceedingly aggressive. Organized labor yields nothing whatever to the Railroads, and every arbitration award is merely another tribute to its autocratic strength.

Meantime, taxes have doubled; and assessments for public improvements are made without end and without regard. Terminals are congested and operation is costly. New equipment is mandatory, and so-called safety appliances of every imaginable description are foisted upon the railroads who have no means whatever to protect themselves from the enforced expenditures therefor.

We are told that the only alternative is governmental ownership. The railroads themselves are getting around to the point where governmental ownership is no longer a thing to be feared. What this means to the public, however, is quite a different story.

Atrophy of the nation is not only a possibility, but it is actually developing very rapidly. There was less miles of new railroad constructed in 1915 than in any year in the past fifty years. In 1915, over 20,000 miles of railroad was placed in the hands of receivers, with a capitalization of over $1,070,000,000, making a total of approximately 42,000 miles operated by receivers in that year.

This is the foundation upon which we are to erect our structures for the future! 42,000 miles of misplaced confidence. 42,000 miles of lost hope.

Aside from the rank injustice to the innocent and trusting purchaser of railroad securities; aside from all the wealth that has been created contingent wholly upon transportation facilities; aside from the unprecedented rise of this nation among nations of the world; aside from the every-day luxuries that are ours, undreamed of by monarchs less than one century ago—there is still another phase: self-preservation! It is of utmost importance, it is vital, that the internal circulating system of this great living nation must be freed from the parasitical growths. Otherwise it shall certainly become atrophied and fall, a victim of its own folly.

Looking into the future over the wreckage of 42,000 miles of insolvent railroad property, let us stop to consider the past, the thousands of thriving cities that have sprung up over night (so to speak) in this wonderful fairyland where we ride upon the winds, where comforts of to-day were wild fancies of yesterday; let us set about calmly and dispassionately to seek the principle, never to lose it again; let us recognize the truth before we, like the eyeless fish, lose the faculty of vision—if we are inclined to be Darwinistic; or, if religious, before the avenging hand of God falls upon us.

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